

LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1. **(Currently Amended)** A method comprising:
detecting a failure of a first virtualization device of a storage area network interconnect, wherein
said storage area network interconnect is coupled to a metadata host,
said metadata host is configured to maintain metadata associated with said first virtualization device, said metadata host is configured to monitor a heartbeat signal from a plurality of virtualization devices, and
said first virtualization device is associated with a unique interconnect device identifier, **wherein**
the unique interconnect device identifier is sufficient to identify
a virtualization device with which the unique
interconnect device identifier is associated, and
the unique interconnect device identifier is configured to
identify the virtualization device as a target of a data
transfer request; and
associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect in response to said detecting, wherein said associating comprises modifying said metadata.
2. **(Original)** The method of claim 1 wherein
said storage area network interconnect is coupled to an application host and to a storage device,
said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and
said virtual storage element comprises at least a portion of said storage device.

3. (Previously Presented) The method of claim 2 wherein said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating; and said second virtualization device is selected from a plurality of virtualization devices.
4. (Previously Presented) The method of claim 3 wherein said monitoring comprises:
monitoring a communications link for a heartbeat signal from said first virtualization device via a failover manager.
5. (Cancelled)
6. (Previously Presented) The method of claim 4 wherein said modifying comprises generating a metadata entry corresponding to said second virtualization device, and said metadata entry comprises said unique interconnect device identifier.
7. (Previously Presented) The method of claim 3 further comprising:
storing a volume map at said second virtualization device in response to said detecting, wherein said volume map is provided by said metadata host.
8. (Original) The method of claim 3 wherein said unique interconnect device identifier comprises a Fibre Channel device identifier.
9. (Original) The method of claim 3 wherein said unique interconnect device identifier comprises at least one of a world wide node name and a world wide port name.
10. (Original) The method of claim 3 wherein said first virtualization device comprises a first virtualization switch, and said second virtualization device comprises a second virtualization switch.

11. **(Currently Amended)** A machine-readable medium storing a plurality of instructions executable by a machine embodied therein, wherein said plurality of instructions when executed cause said machine to perform a method comprising:
 detecting a failure of a first virtualization device of a storage area network interconnect, wherein
 said storage area network interconnect is coupled to a metadata host,
 said metadata host is configured to maintain metadata associated with said first virtualization device, said metadata host is configured to monitor a heartbeat signal from a plurality of virtualization devices, and
 said first virtualization device is associated with a unique interconnect device identifier, wherein
the unique interconnect device identifier is sufficient to identify
a virtualization device with which the unique
interconnect device identifier is associated, and
the unique interconnect device identifier is configured to
identify the virtualization device as a target of a data
transfer request; and
 associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect in response to said detecting, wherein said associating comprises modifying said metadata.
12. **(Previously Presented)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 11 wherein
 said storage area network interconnect is coupled to an application host and to a storage device,
 said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and
 said virtual storage element comprises at least a portion of said storage device.
13. **(Previously Presented)** The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 12 wherein

said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating.

14. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said monitoring comprises:

monitoring a communications link for a heartbeat signal from said first virtualization device.

15. (Cancelled)

16. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 14 wherein said modifying comprises generating a metadata entry corresponding to said second virtualization device, and said metadata entry comprises said unique interconnect device identifier.

17. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13, said method further comprising:

storing a volume map at said second virtualization device in response to said detecting, wherein said volume map is provided by said metadata host.

18. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said unique interconnect device identifier comprises a Fibre Channel device identifier.

19. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein said unique interconnect device identifier comprises at least one of a world wide node name and a world wide port name.

20. (Previously Presented) The machine-readable medium storing a plurality of instructions executable by a machine embodied therein of claim 13 wherein
 said first virtualization device comprises a first virtualization switch, and
 said second virtualization device comprises a second virtualization switch.
21. **(Currently Amended)** A data processing system comprising:
 means for detecting a failure of a first virtualization device of a storage area network interconnect, wherein
 said first virtualization device is associated with a unique interconnect device identifier, **wherein**
 the unique interconnect device identifier is sufficient to identify
 a virtualization device with which the unique
 interconnect device identifier is associated, and
 the unique interconnect device identifier is configured to
 identify the virtualization device as a target of a data
 transfer request,
 said storage area network interconnect is coupled to an application host, a metadata host, and to a storage device,
 said metadata host is configured to maintain metadata associated with a virtual storage element,
 said metadata host is configured to monitor a heartbeat signal from a plurality of virtualization devices,
 said first virtualization device is configured to present said virtual storage element to said application host using a host device identifier, and
 said virtual storage element comprises at least a portion of said storage device;
 and
 means for associating said unique interconnect device identifier with a second virtualization device of said storage area network interconnect coupled to said means for detecting, wherein said associating comprises modifying said metadata.
22. (Original) The data processing system of claim 21 wherein

said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier in response to said associating.

23. (Previously Presented) The data processing system of claim 22 wherein said means for detecting comprises:

means for monitoring a communications link for a heartbeat signal from said first virtualization device.

24. (Cancelled)

25. (Original) The data processing system of claim 22 wherein said unique interconnect device identifier comprises a Fibre Channel device identifier.

26. (Original) The data processing system of claim 22 wherein said unique interconnect device identifier comprises at least one of a world wide node name and a world wide port name.

27. (Original) The data processing system of claim 22 wherein said first virtualization device comprises a first virtualization switch, and said second virtualization device comprises a second virtualization switch.

28. (Currently Amended) A data processing system comprising:
 a metadata host, wherein the metadata host comprises:
 a monitor module to monitor a communications link for a heartbeat signal from a first virtualization device of a storage area network interconnect, wherein said first virtualization device is associated with a unique interconnect device identifier, wherein the unique interconnect device identifier is sufficient to identify a virtualization device with which the unique interconnect device identifier is associated, and the unique interconnect device identifier is configured to identify the virtualization device as a target of a data transfer request; and

a failover module coupled to said monitor module to detect a failure of said first virtualization device and to associate said unique interconnect device identifier with a second virtualization device of said storage area network interconnect in response to said detecting.

29. (Original) The data processing system of claim 28 wherein said storage area network interconnect is coupled to an application host and to a storage device,
said first virtualization device is configured to present a virtual storage element to said application host using a host device identifier, and
said virtual storage element comprises at least a portion of said storage device.
30. (Original) The data processing system of claim 29 wherein said second virtualization device is configured to present said virtual storage element to said application host using said host device identifier following a failure of said first virtualization device.